

Mini Input Module (RLVBMIM01)



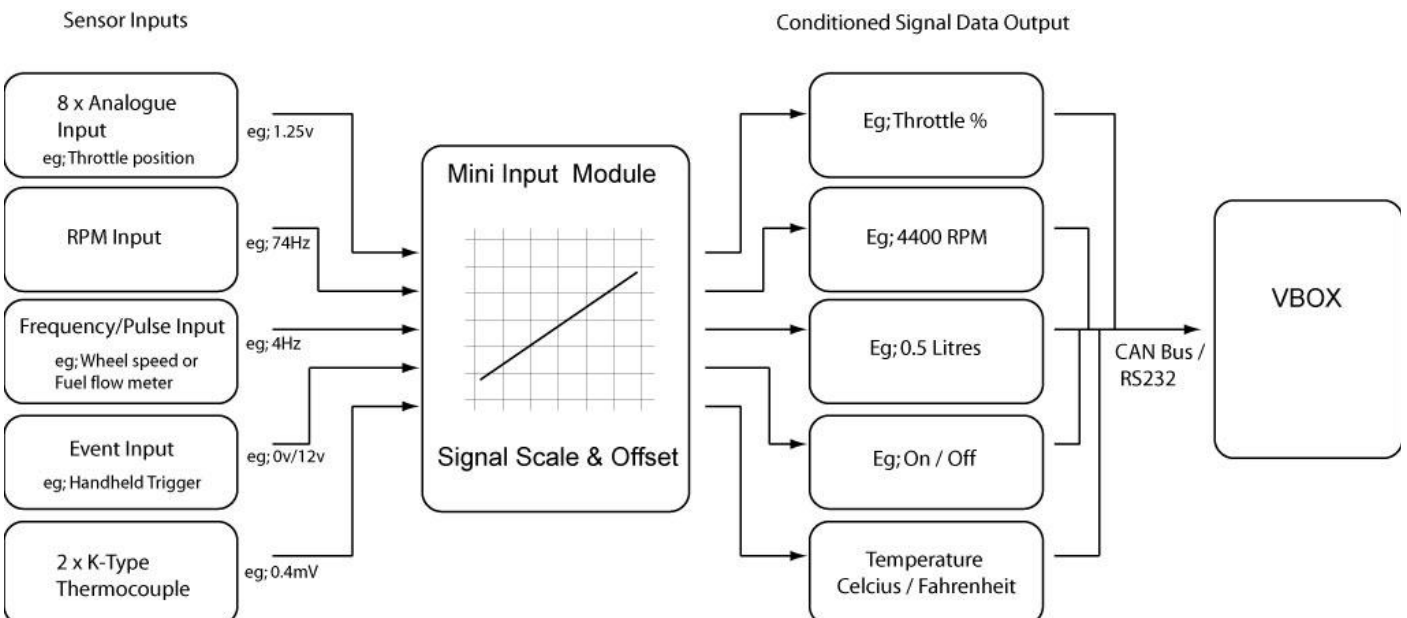
The VBOX mini input module is a general purpose input / output module designed for use by either the VBOX Mini or existing VBOX products.

This module allows data such as Temperature, RPM, Wheel Speed, Fuel Flow, Throttle angles and Pedal forces to be easily measured along with the VBOX GPS data.



Inputs / Outputs

Inputs	Outputs
8 x 14 bit Analogue inputs	1 x Digital Output
1 x Low-Tension RPM input	1 x Analogue Output (<i>Analogue and Digital outputs only available when used with a VBOX Mini</i>)
1 x Wheel Speed Input with gain control	
1 x Digital State Input for event marker	
2 x K-Type thermocouple interface	



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Specification

Analogue Input		Digital Input 1	
Number of channels	8	Input Voltage (max range)	30VDC
DC Accuracy	10mV	Switching Threshold L>H	4V
Input Range	0V – 13.8V	Switching Threshold L<H	3.8V
Input Impedance	20K	Input Frequency Range	1Hz to 10KHz
Voltage Resolution	1.06mV		

RPM Input		Digital Input 2	
Input type	Low tension Coil Signal	Input voltage (max range)	±40V
Minimum signal amplitude	5V	Minimum signal amplitude	0.5V
Input frequency range	0 to 1000Hz	Input frequency range	1Hz to 10KHz
Resolution	0.1RPM	Minimum frequency	1Hz

Thermocouple		Environmental and physical	
Input Channels	2 Differential input channels	Weight	Approx 500 grammes
Thermocouple type	K-Type	Size	119mm x 128mm x 30mm
Update rate	5.8Hz	Operating temperature	-30°C to +60°C
Resolution	0.25°C	Storage temperature	-40°C to +85°C
Range	0 to 1024°C		
Accuracy	±3°C		

Digital Output		Analogue Output	
Frequency range	DC - 10Khz	Output voltage range	0 to 5V DC
Default Setting	25Hz per Kph (0-400Kph) 90 pulses per metre	Default Setting	0.0125Volts per Kph 76uV/bit

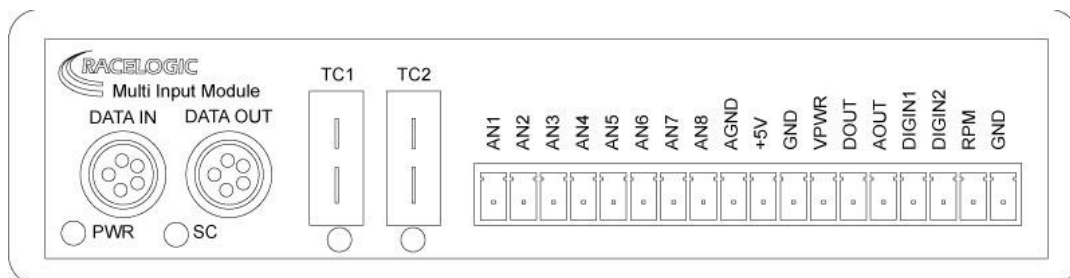
Power	
Input Voltage Range	6 – 30V DC
Power	Typically 1.5 Watts

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Signal Connections



Input Connector: 18 Way

Pin	Function	I/O	Pin	Function	I/O
AN1	Analogue Channel 1 +	I	GND	Ground	I/O
AN2	Analogue Channel 2 +	I	VPWR	Power Output	I/O
AN3	Analogue Channel 3 +	I	DOUT	Digital Output	O
AN4	Analogue Channel 4 +	I	AOUT	Analogue Output	O
AN5	Analogue Channel 5 +	I	DIGIN1	Digital input e.g. Event trigger	I
AN6	Analogue Channel 6 +	I	DIGIN2	Digital Input e.g. Wheel speed signal	I
AN7	Analogue Channel 7 +	I	RPM	RPM input	I
AN8	Analogue Channel 8 +	I	GND	Ground	I/O
AGND	Analogue Ground	I			
+5V	+5V (sensor supply)	O			